

# Just Think About It: Mindfulness, Sexism, and Prejudice Toward Feminists

Sarah J. Gervais · Lesa Hoffman

Published online: 23 November 2012  
© Springer Science+Business Media New York 2012

**Abstract** This study examined the relation between mindfulness, sexist motivations and beliefs, and prejudice toward women who violate traditional gender roles—namely feminists. In a preliminary study, 672 (251 men, 421 women) undergraduates from a United States Midwestern university completed a measure of mindfulness and warmth toward feminists and consistent with hypotheses, more mindfulness was associated with more warmth toward feminists. Extending this initial finding to the main study, 653 (273 men, 380 women) undergraduates from a U.S. Midwestern university completed measures of mindfulness, motivation to respond without sexism, ambivalent sexism, and warmth toward feminists. Consistent with hypotheses, compared to women participants, men participants were lower on internal motivation to respond without sexism, higher on hostile and benevolent sexism and less warm toward feminists. Also consistent with hypotheses, for men participants, more mindfulness was associated with higher internal motivation to respond without sexism, less benevolent sexism, and more warmth toward feminists. In contrast, for women participants, more mindfulness was only associated with less hostile sexism. Finally, a path analysis revealed that the positive relation between mindfulness and warmth toward feminists for men participants was partially mediated by more internal motivation to respond without sexism (i.e., a significant indirect effect), but not by less sexist beliefs. Implications for mindfulness, sexism, and prejudice more generally are discussed.

**Keywords** Mindfulness · Hostile sexism · Benevolent sexism · Motivation · Feminism · Gender

---

S. J. Gervais (✉) · L. Hoffman  
Department of Psychology, University of Nebraska-Lincoln,  
Lincoln, NE 68588-0308, USA  
e-mail: sgervais2@unl.edu

## Introduction

*Stereotyped thinking about others becomes a mindless habit*

(Weiten et al. 2008, p. 187)

*People are at their cognitive peak at different times of the day, and when not, they may slip into mindless stereotyping*

(Baumeister and Finkel 2010, p. 84)

Sexism toward women, particularly women who violate traditional gender roles such as feminists, is a serious personal and societal issue in the United States (Rudman and Glick 2008). One reason for prejudice toward feminists in the U.S. is that people hold sexist motivations and beliefs about what women are and should be like; they feel prejudice toward women who do not fit these images (Eagly and Karau 2002; Heilman 2001). This explanation implies that prejudice toward feminists may be tempered when people hold less sexist motivations and beliefs. We suggest that mindfulness, characterized as nonjudgmental attention and awareness to the present moment (Langer 1989; Kabat-Zinn 1994; Brown and Ryan 2003), may be one such factor associated with less sexist motivations and thinking and thus, less prejudice toward feminists; that is, if sexist motivations and beliefs are *mindless* habits (e.g., Baumeister and Finkel 2010; Weiten et al. 2008), then they may be reduced by making people more *mindful*.

Specifically, we examined whether more mindfulness was associated with less prejudice toward feminists, particularly for men. We initially considered this question in a preliminary study. We then examined whether sexist motivations and beliefs explained the relation between more mindfulness and less prejudice toward feminists in the main study. We also explored these relations separately for women. Toward that end, research

and theory on sexism and mindfulness was reviewed to derive testable hypotheses. Unless otherwise noted, our studies include participants from the U.S. However, we believe that the cross-cultural implications of this work may be considerable, given that the notion of mindfulness originated in Eastern cultures (Kabat-Zinn 1990), so we return to potential implications and directions for future research in this area in the discussion. To test hypotheses, undergraduate women and men from a Midwestern university in the U.S. completed measures of mindfulness, motivation to respond without sexism, ambivalent sexism, and warmth toward feminists in a preliminary and main study. We then estimated a multiple-group mediation model to examine the proposed relations between mindfulness and sexism in men and women.

### Sexism

Generally speaking, legislative and normative changes have made sexism toward women unacceptable in many contexts, particularly in legal and social arenas (Swim et al. 1995; Tougas et al. 1995). As a result, overt sexism has decreased considerably in the past several decades (Klonis et al. 2005; Swim et al. 1995) and many of the sexist institutional barriers that women once encountered have been eliminated (Gervais and Vescio 2007). For example, more women are entering traditionally masculine domains (e.g., science, technology, math, and engineering) and being compensated more for their work than ever before in the U.S. and around the world (U.N. World Survey on the Role of Women in Development 2009; U.S. Department of Labor and Bureau of Labor Statistics 2006).

Nevertheless, women, particularly those who violate traditional gender roles, still report experiencing everyday sexism (i.e., the expression of sexism embedded in people's daily lives; Swim et al. 1998) on a regular basis (Glick and Fiske 1996; Klonis et al. 2005; Swim et al. 1995). Women in the U.S., for example, report one to two sexist incidents per week, including gender-related verbal and nonverbal behaviors (e.g., sexist comments and jokes, objectifying gazes; Swim et al. 2001). As well, sexist beliefs predict more negative attitudes toward non-traditional women (e.g., Glick et al. 1997); because they violate gender roles, non-traditional women (e.g., feminists, career women) are particularly prone to experience everyday sexism (e.g., Eagly and Wood 1991; Fiske et al. 2002; Heilman 2001) including both derogation and backlash (Rudman and Glick 2001; Rudman et al. 2012). Furthermore, gender differences in sexism still persist with men reporting more sexist beliefs (e.g., Glick and Fiske 1996, 2001) and engaging in more sexist behavior (e.g., Vescio et al. 2005), as well as holding less positive beliefs toward feminists and the women's movement than women (Fitzpatrick Bettencourt et al. 2011). Sexism has several negative cognitive, affective,

and behavioral consequences for women. For example, it causes thoughts of incompetence and cognitive decrements (Dardenne et al. 2007; Dumont et al. 2010; Vescio et al. 2005). It also causes anger (Vescio et al. 2005), anxiety (Spencer et al. 1999), and decreased control (Gervais and Vescio 2012).

Because of the frequency with which non-traditional women experience sexism and its adverse consequences, examining correlates and predictors of sexism toward this group of women remains a critical question for both theorists and researchers (Lee et al. 2010). Most theory and research has identified factors that *exacerbate* sexism in general and toward feminists in particular, such as gender (Fitzpatrick Bettencourt et al. 2011; Glick and Fiske 1996), traditional gender role ideology (Chen et al. 2009), and religious beliefs (Fitzpatrick Bettencourt et al. 2011; Glick et al. 2002), whereas predictors that *temper* sexism, such as egalitarianism (Klonis et al. 2005), have received considerably less attention. The purpose of this research was to examine one possible protective factor of sexism—namely, mindfulness. Identifying factors that are associated with less sexism, particularly for people who hold sexist beliefs (e.g., men) lays the foundation for interventions to combat it and developing such interventions has been identified as imperative for sexism research (Lee et al. 2010).

### Mindfulness and Sexism

The concept of mindfulness originates in Eastern, Buddhist traditions of spirituality (Kabat-Zinn 1990). Mindfulness has been conceptualized as nonjudgmental attention and awareness to the present moment (e.g., Baer et al. 2004; Brown and Ryan 2003; Cardaciotto et al. 2008; Kabat-Zinn 1994; Langer 1989; Langer and Moldoveanu 2000; Walach et al. 2006). In other words, mindfulness involves purposefully paying attention to the present in an accepting, non-judgmental way. Mindfulness can be considered a dispositional trait; some individuals are habitually more mindful than others (e.g., Brown et al. 2007; Buchheld et al. 2001) and it can be learned through training and practice (e.g., mindfulness-based stress reduction, Baer 2003; Grossman et al. 2004; Kabat-Zinn 1990). The concept of mindfulness is also multi-dimensional (Lau et al. 2006), but core to its conceptualization is awareness to the present moment. Thus, we utilized two measures of dispositional mindfulness in the present work—we used one that assessed awareness to the present moment only in a preliminary study and one that also included the nonjudgmental acceptance aspect of mindfulness in the main study. Importantly, trait mindfulness is associated with a host of positive intrapersonal and interpersonal outcomes, such as psychological health, heightened self-regulation, and better relationships (Brown et al. 2007).

Turning attention to potential positive *intergroup* outcomes, we suggest that more (vs. less) mindful men will feel more warmth toward feminists. At the very least, mindfulness is associated with a general nonjudgmental orientation (Kabat-Zinn 1990); thus, mindful individuals should hold relatively positive views toward other people, regardless of whether the people are from their outgroups or ingroups (e.g., men vs. women) or are from negatively stereotyped groups (e.g., non-traditional women such as feminists). Consistent with this notion, recent research shows that mindfulness tempers prejudiced responding toward outgroups. Specifically, when White participants' mortality was salient, they judged a White defendant more leniently than a Black defendant (Greenberg et al. 2001), but mindfulness moderated this effect; only participants low in trait mindfulness showed pro-White biases, whereas biases were eliminated for participants high in trait mindfulness (Niemic et al. 2010; Study 3). Applied to the present work, more mindful men should be less prejudiced toward feminists because they are less likely to direct prejudice toward people from their outgroups than less mindful men. Although mindfulness has been introduced as a possible intervention with respect to prejudice (e.g., Langer and Moldoveanu 2000; Demick 2000), to our knowledge Niemic et al. (2010) is the only published study that provides direct empirical support for this general suggestion. We extended this seminal work to sexism and focused on men's prototypic sexism (i.e., sexism directed at women, Barreto, and Ellemers 2005a; Inman and Baron 1996) and prejudice toward feminists in the present work. Because of links between more mindfulness and less prejudice toward outgroups (Niemic et al. 2010), we expected more mindfulness to be related to less sexism toward women in general and toward feminists in particular for men participants. We also considered whether mindfulness was associated with women's prejudice toward feminists. However, because prejudice toward feminists may represent women's ingroups (feminists are presumed to be women) or women's outgroups (some women may still regard feminists as outgroups), our examination regarding women participants was more exploratory in nature.

Despite evidence showing that mindfulness and prejudice are linked, it remains unclear *why* more mindfulness is associated with less prejudice. We examined this question by considering two potential mechanisms: (a) whether more motivation to respond in a non-sexist manner and/or (b) whether less sexist beliefs explained the relation between mindfulness and warmth toward feminists. Sexist motivations and beliefs, like other aspects of prejudice, are often activated spontaneously, automatically, and without awareness (Devine 1989; Fiske and Neuberg 1990; Macrae et al. 1995, 1994). Relying on these sexist motivations and beliefs, for example, the mindless man assumes that women are more emotional than men without any motivation to

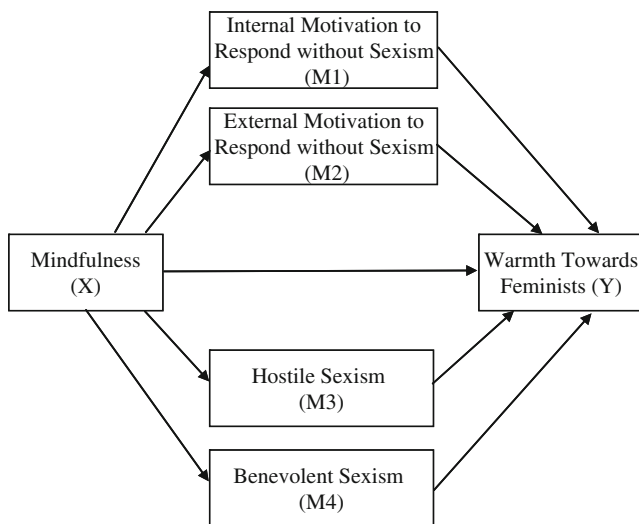
question whether these beliefs are true of all women. Consequently, when the mindless man encounters a feminist woman who violates gender roles by appearing unemotional, he will experience a negative reaction toward her because he is motivated to respond in sexist manner and she does not fit his gendered beliefs.

Regarding sexist motivations specifically, we expected that more mindful men would be more motivated to respond in a non-sexist manner toward feminists because mindfulness is associated with a better ability to self-regulate (Brown et al. 2007). Specifically, mindfulness is theorized to facilitate one's capacity to respond in ways that serve one's values, goals, and needs instead of habits or overlearned responses (Leary et al. 2006). Although there is no existing research regarding prejudice motivation and mindfulness specifically, published studies demonstrate that mindfulness is positively associated with better self-regulation with respect to other negative behaviors requiring motivation to overcome, including gambling (Lakey et al. 2007) and smoking (Gifford et al. 2004). Because more (vs. less) mindful men are motivated to avoid habitual, rigid sexist responses, upon meeting the feminist women who violates her gender role, his prejudice should be tempered.

In addition, we expected more mindfulness to be associated with less sexist beliefs. The mindful man does not assume based on sexist beliefs that all women are more emotional than men and thus when meeting the feminist woman, his prejudice should be mitigated. Consistent with the notion that mindfulness interrupts habitual thinking, such as prejudiced beliefs, mindful (vs. control) people have shown reduced Stroop interference effects (Wenk-Sormaz 2005). Additional indirect evidence comes from mindfulness and education research with Langer and Piper (1987) encouraging mindfulness by introducing information about objects in a conditional way, using language like "could be" and "perhaps" rather than in an absolute way, using language like "is" and "can only be." Participants in the mindful condition thought about the objects more creatively, generating novel uses for the objects. Applied to this work, mindfulness should be associated with less absolute, sexist beliefs about what women are like, and thus more positive feelings toward feminists who do not necessarily fit these sexist beliefs.

#### Overview of the Present Work

Based on this rationale, we examined whether mindfulness was indeed associated with more warmth toward feminists and whether more motivation to respond without sexism and/or less sexist beliefs explained this relation (see Fig. 1 for mediation model). To consider these possibilities, men and women undergraduates completed measures of mindfulness, warmth toward feminists, motivation to respond



**Fig. 1** Path model to be used in assessing mediation. The same path model was estimated simultaneously but separately for both men and women; the resulting parameter estimates are shown in Table 4

without sexism (internal and external), and ambivalent sexism (hostile and benevolent).

Because they violate gender roles, feminists are often perceived unfavorably and experience discrimination (e.g., Eagly and Wood 1991; Fiske et al. 2002; Heilman 2001), especially derogation and backlash (Rudman and Glick 2001; Rudman et al. 2012). However, because more mindful individuals may be more motivated to respond without sexism and less likely to hold sexist beliefs, they should be less likely to direct prejudice toward feminists. Based on this rationale, we expected mindfulness to be associated positively with warmth toward feminists. Furthermore, because sexist motivations and beliefs predict more negative attitudes toward non-traditional women, like feminists (e.g., Glick et al. 1997), we also examined the relations between mindfulness and sexist motivations and beliefs.

More specifically, we expected greater mindfulness to be associated with more motivation to respond in a non-sexist manner. Internal motivation to respond without sexism represents people's concern with acting consistently with personally important non-sexist standards and is also related negatively to sexist beliefs (Klonis et al. 2005). Thus, we expected more mindful people to be internally motivated to respond in less prejudiced ways. As a comparison, we also explored external motivation to respond without sexism, which is conceptualized as people's concern with acting non-sexist to avoid negative reactions from others. External motivation to respond without sexism is not associated with sexist beliefs, but is instead related to fear of negative evaluation and public self-consciousness. Thus, we did not expect relations between mindfulness and external motivation to respond without sexism.

Additionally, more mindfulness may be linked to less sexist beliefs. Ambivalent sexism (Glick and Fiske 1996,

2001; Lee et al. 2010) consists of hostile and benevolent attitudes toward women. Hostile sexism represents antagonistic prejudice toward women to preserve male power and dominance and is characterized by adversarial sexist beliefs, including viewing women as attempting to dominate men, degrading women in non-traditional roles (e.g., feminists), and suggesting that women use their sexuality to control men. Benevolent sexism is positively correlated with hostile sexism, but represents seemingly favorable beliefs about women and is characterized by sexist beliefs including viewing women as in need of protection, extolling women in traditional roles (e.g., homemakers), romanticizing and idealizing women in romantic relationships. If mindfulness is related to less habitual and prejudiced responding (Brown et al. 2007; Langer 1989), then more mindful people should be less likely to report sexist beliefs.

Finally, in the present work, we focused on prototypic instances of sexism (Barreto and Ellemers 2005a; Inman and Baron 1996). That is, we examined sexism directed at women. Men consistently report less motivation to respond in a non-sexist manner and more sexist beliefs toward women, including non-traditional women, and feminists in particular, than women (e.g., Fitzpatrick Bettencourt et al. 2011; Glick and Fiske 1996, 2001; Glick et al. 2000; Klonis et al. 2005). Replicating previous research, our first research question concerned gender differences across outcomes. Specifically, we hypothesized that relative to women, men would report less internal motivation to respond without sexism, more hostile and benevolent sexism, and less warmth toward feminists; we did not expect gender differences in mindfulness or external motivation to respond without sexism.

Our second research question concerned the gender-specific associations among these outcomes. Given that the existing research linking more mindfulness to less prejudice shows a relation between less mindfulness and less prejudice toward outgroups (Niemic et al. 2010), our hypotheses for men were relatively straightforward. Specifically, we hypothesized that, in men participants, more mindfulness would be associated with more internal motivation to respond without sexism, less hostile and benevolent sexism, and more warmth toward feminists, although we did not expect a significant association with external motivation to respond without sexism. We also examined the relations between mindfulness, motivation to respond without sexism, ambivalent sexism, and warmth toward feminists in women participants. Again, because we examined sexism directed at feminists, who may be regarded as outgroups or ingroups for women, we included women participants for more exploratory purposes.

Finally, our third research question concerned to what extent more motivation to respond without sexism or less ambivalent sexism might explain relations between mindfulness and warmth toward feminists for men. Accordingly, we estimated a multiple-group path model (as shown in



Fig. 1), in which mindfulness had direct effects on the mediators of motivation to respond without sexism (internal and external) and ambivalent sexism (hostile and benevolent) and in which mindfulness, motivation to respond without sexism, and ambivalent sexism each had direct effects on warmth toward feminists. In men participants, we anticipated indirect effects between mindfulness and warmth toward feminists through internal motivation to respond without sexism and ambivalent sexism (hostile and benevolent), but not through external motivation to respond without sexism. We then explored the extent to which these direct and indirect effects differed in women participants. We initially considered our first two questions in a preliminary study and then considered all three research questions in the main study.

## Preliminary Study

### Hypothesis 1

Regarding our first research question, we hypothesized that men would report less warmth toward feminists than women (Hypothesis 1).

### Hypothesis 2

Regarding our second research question, we hypothesized that more mindfulness would be associated positively with more warmth toward feminists for men (Hypothesis 2). We explored this relation for women.

## Method

### Participants

A sample of 672 (251 men, 421 women) undergraduates from a U.S. Midwestern university was recruited through a Psychology Department subject pool and participated in a preliminary study for course credit. Participants ranged in age from 17 to 29 years ( $M_{\text{men}}=19.15$ ,  $SD_{\text{men}}=1.67$ ,  $M_{\text{women}}=18.71$ ,  $SD_{\text{women}}=1.31$ ) and primarily identified as European American (214 men, 85 % and 372 women, 88 %), but also African American (4 men, 2 % and 6 women, 1 %), Asian American (11 men, 4 % and 14 women, 3 %), Latino/a (10 men, 4 % and 14 women, 3 %), Native American (2 men, 1 % and 3 women, 1 %), or Other (9 men, 4 % and 12 women, 3 %).

### Procedure

After providing informed consent, participants completed an online survey using SurveyMonkey software that included a battery of psychological measures and took approximately

1 hr to complete. Embedded within the survey were measures of mindfulness and warmth toward feminists. Following the survey, participants reported demographics.

### Mindfulness

To assess mindfulness, participants completed the 10-item awareness sub-scale of the Philadelphia Mindfulness Scale (PHLMS; Cardaciotto et al. 2008) that assesses mindful awareness in the past week on a 5-point scale (1 = *never*, 5 = *very often*, e.g., I am aware of what thoughts are passing through my mind; when talking with other people, I am aware of their facial and body expressions). Mean mindful awareness scores were calculated ( $\alpha_{\text{men}}=.79$ ,  $\alpha_{\text{women}}=.76$ ). The awareness sub-scale of the PHLMS is regarded as a reliable and valid measure of mindful awareness to the present moment (Cardaciotto et al. 2008; Lau et al. 2006).

### Warmth Toward Feminists

To assess warmth toward feminists, participants completed feeling thermometers toward feminists and the women's movement on an 11-point scale (0° = *very coolly*, 100° = *very warmly*). Mean warmth scores for feminists were calculated from these two items ( $r_{\text{men}}=.47$ ,  $r_{\text{women}}=.53$ ). Feeling thermometers are regarded as reliable and valid measures of prejudice toward different groups (Hugenberg and Bodenhausen 2003).

## Results and Discussion

As shown in Table 1, participants reported moderate levels of mindful awareness to the present moment and moderate levels of warmth toward feminists. To preliminarily consider our first research question, we examined gender differences in mindfulness and warmth toward feminists using a multivariate analysis of variance (MANOVA). Consistent with Hypothesis 1, there was a significant omnibus effect of participant gender,  $F(2, 664)=36.50$ ,  $p<.0001$ ; Wilk's

**Table 1** Means, standard deviations, and correlations of all factors by participant gender for preliminary study

	Women	Men	1.	2.
1. Mindfulness	3.56 (.53) <sub>a</sub>	3.57 (.56) <sub>a</sub>	–	<b>.16</b>
2. Warmth toward feminists	61.90 (23.14) <sub>a</sub>	46.35 (22.68) <sub>b</sub>	<b>.12</b>	–

Bold font denotes significant correlation coefficients,  $p<.05$ . Correlations for men ( $N=249$ ) are reported above the diagonal and correlations for women ( $N=412$ ) are reported below the diagonal. Different subscripts within rows are significantly different,  $p<.0001$ ,  $df=2$ . Mindfulness (1 = *never*, 5 = *very often*), Warmth Toward Feminists (0° = *very coolly*, 100° = *very warmly*)

$\Lambda=.901$ ,  $\eta_p^2=.10$ . As indicated in Table 1, univariate analyses of variance (ANOVAs) revealed relative to women participants, men participants reported less warmth toward feminists,  $F(1, 666)=71.59$ ,  $MSE=377.64$ ,  $p<.0001$ ,  $\eta_p^2=.10$ , as hypothesized. No significant gender differences emerged on mindful awareness. With respect to our second research question, we examined the bivariate correlation between mindfulness and warmth toward feminists separately in men and women participants. Consistent with Hypothesis 2, in men participants, more mindfulness was associated with more warmth toward feminists (see above the diagonal in Table 1). In women participants, more mindfulness was also associated with more warmth toward feminists (see below the diagonal in Table 1), but to a lesser extent than in men participants.

This preliminary study provides initial evidence that men have less positive feelings toward feminists than women, which is consistent with Hypothesis 1 and addresses our first research question. Also, consistent with Hypothesis 2 regarding our second question, mindful awareness was associated with more warmth toward feminists for men as well as women. This investigation lends support to the notion that more mindfulness is associated with more warmth toward feminists for men, but it remains unclear *why* mindfulness is related to less prejudice.

## Main Study

The main study extended the preliminary study in two ways. First, it conceptually replicated this initial study by including a different measure of mindfulness. Second, it included measures of motivation to respond without sexism and ambivalent sexism to formally test a mediation model (see Fig. 1), examining whether less sexist motivations and beliefs explained the relation between mindfulness and warmth toward feminists.

### Hypothesis 3

Regarding our first research question, we hypothesized that relative to women, men would report less internal motivation to respond without sexism (Hypothesis 3a), more hostile and benevolent sexism (Hypothesis 3b), and less warmth toward feminists (Hypothesis 3c). We examined Hypothesis 3a-3c by conducting a multivariate analyses of variance on all of the variables with participant gender as the between participants factor.

### Hypothesis 4

Regarding our second research question, we hypothesized that, in men participants, more mindfulness would be

associated with more internal motivation to respond without sexism (Hypothesis 4a), less hostile and benevolent sexism (Hypothesis 4b), and more warmth toward feminists (Hypothesis 4c). We also hypothesized that more warmth toward feminists would be associated with more internal motivation to respond without sexism (Hypothesis 4d) and less hostile and benevolent sexism (Hypothesis 4e). We first examined Hypotheses 4a-4e by estimating bivariate correlations between these variables. We also examined Hypothesis 4a-4e by estimating a multiple-group path model (see Fig. 1). We explored these relations for women participants.

### Hypothesis 5

Finally, estimating a multiple-group path model also allowed us to examine our final research question by considering the indirect effects of internal motivation to respond without sexism and ambivalent sexism. In men participants, we hypothesized indirect effects between mindfulness and warmth toward feminists through internal motivation to respond without sexism (Hypothesis 5a) and ambivalent sexism (hostile and benevolent, Hypothesis 5b). We did not expect an indirect effect through external motivation to respond without sexism. We also explored these effects for women participants.

## Method

### Participants

A separate sample of 653 (273 men, 380 women) undergraduates from a U.S. Midwestern university was recruited through a Psychology Department subject pool and participated for course credit. Participants ranged in age from 17 to 29 years ( $M_{men}=19.08$ ,  $SD_{men}=1.16$ ,  $M_{women}=18.96$ ,  $SD_{women}=1.24$ ) and primarily identified as European American (230 men, 84 % and 322 women, 85 %), but also African American (6 men, 2 % and 9 women, 2 %), Asian American (13 men, 5 % and 15 women, 4 %), Latino/a (10 men, 4 % and 16 women, 4 %), Native American (2 men, 1 % and 3 women, 1 %), or Other (11 men, 4 % and 15 women, 4 %).

### Procedure

After providing informed consent, participants completed an online survey using SurveyMonkey software that included a battery of psychological measures and took approximately 1 hr to complete. Embedded within the survey were measures of mindfulness, sexist motivations, sexist beliefs, and warmth toward feminists. Following the survey, participants were asked to report demographics.

### Mindfulness

To assess mindfulness, participants completed the short form of the Freiburg Mindfulness Inventory (FMI; Walach et al. 2006). The FMI is a 14-item measure that assesses how frequently people experience mindfulness (e.g., I am open to the experience of the present moment) on a 4-point scale (1 = *rarely*, 4 = *almost always*). One item was reverse-coded and mean mindfulness scores were calculated ( $\alpha_{\text{men}}=.79$ ,  $\alpha_{\text{women}}=.82$ ). The FMI is regarded as a reliable and valid measure of mindfulness (Buchheld et al. 2001; Walach et al. 2006).

### Internal and External Motivation to Respond Without Sexism

To assess internal motivation to respond without sexism, participants completed the Internal Motivation to Respond without Sexism Scale (IMS-S; Klonis et al. 2005). The IMS-S is a 5-item measure that assesses the degree to which people are internally motivated to respond without sexism (e.g., I am personally motivated by my beliefs to be nonsexist toward women) on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*). One item was reverse-coded and mean internal motivation to respond without sexism scores were calculated ( $\alpha_{\text{men}}=.86$ ,  $\alpha_{\text{women}}=.80$ ). Participants also completed the External Motivation to Respond without Sexism Scale (EMS-S; Klonis et al. 2005). The EMS-S is a 5-item measure that assesses the degree to which people are externally motivated to respond without sexism (e.g., Because of today's politically correct standards I try to appear nonsexist toward women) on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*). Mean external motivation to respond without sexism scores were calculated ( $\alpha_{\text{men}}=.78$ ,  $\alpha_{\text{women}}=.74$ ). The IMS-S and EMS-S are regarded as reliable and valid measures of internal and external motivation to respond without sexism (Klonis et al. 2005).

### Ambivalent Sexism

To assess sexist beliefs, participants also completed the ambivalent sexism inventory (ASI; Glick and Fiske 1996). To assess hostile sexism, participants completed the 11-item hostile sexism subscale of the ASI, which assesses negative sexist beliefs toward women (e.g., When women lose to men in a fair competition, they typically complain about being discriminated against) on a 7-point scale (1 = *disagree strongly*, 7 = *agree strongly*). To assess benevolent sexism, participants completed the 11-item benevolent sexism subscale of the ASI, which assesses seemingly positive sexist beliefs toward women (e.g., Women should be cherished and protected by men) on 7-point scales (1 = *disagree strongly*, 7 = *agree strongly*). Six items (3,

6, 7, 13, 18, 21) were reverse coded and mean hostile ( $\alpha_{\text{men}}=.82$ ,  $\alpha_{\text{women}}=.69$ ) and benevolent sexism scores were calculated ( $\alpha_{\text{men}}=.71$ ,  $\alpha_{\text{women}}=.67$ ). The hostile and benevolent sexism subscales of the ASI are regarded as reliable and valid measures of sexist beliefs (Glick and Fiske 1996, 2001).

### Warmth Toward Feminists

Finally, to assess warmth toward feminists, participants completed the same measure as in the preliminary study. Specifically, feeling thermometers toward feminists and the women's movement on an 11-point scale (0° = *very coolly*, 100° = *very warmly*) were again completed. Mean warmth scores for feminists were calculated from these two items ( $r_{\text{men}}=.61$ ,  $r_{\text{women}}=.54$ ).

## Results and Discussion

### Gender Differences

As shown in Table 2, participants reported moderate levels of mindfulness, benevolent sexism, hostile sexism, and external motivation to respond without sexism and somewhat high levels of internal motivation to respond without sexism. With respect to our first research question, we examined gender differences in mindfulness, internal and external motivation to respond without sexism, hostile and benevolent sexism, and warmth toward feminists using a MANOVA. As hypothesized, there was a significant omnibus effect of participant gender,  $F(6, 642)=18.55$ ,  $p<.0001$ ; Wilk's  $\Lambda=.852$ ,  $\eta_p^2=.15$ . As indicated in Table 2 and as hypothesized, separate ANOVAs revealed relative to women participants, men participants reported less internal motivation to respond without sexism,  $F(1, 648)=32.92$ ,  $MSE=54.24$ ,  $p<.0001$ ,  $\eta_p^2=.05$  (consistent with Hypothesis

**Table 2** Means and standard deviations of all factors by participant gender for main study

	Women	Men
Mindfulness	2.84 (.45) <sub>a</sub>	2.82 (.43) <sub>a</sub>
Internal motivation	5.50 (1.21) <sub>a</sub>	4.92 (1.38) <sub>b</sub>
External motivation	4.11 (1.20) <sub>a</sub>	4.09 (1.24) <sub>a</sub>
Hostile sexism	3.70 (.75) <sub>a</sub>	4.19 (.88) <sub>b</sub>
Benevolent sexism	3.97 (.77) <sub>a</sub>	4.21 (.80) <sub>b</sub>
Warmth toward feminists	62.46 (22.09) <sub>a</sub>	46.59 (24.04) <sub>b</sub>

Different subscripts within rows are significantly different,  $p<.0001$ ,  $df=6$ . Mindfulness (1 = *rarely*, 4 = *almost always*), Warmth Toward Feminists (0° = *very coolly*, 100° = *very warmly*), and Internal Motivation, External Motivation Hostile Sexism, and Benevolent Sexism, (1 = *disagree strongly*, 7 = *agree strongly*)

3a), more hostile sexism,  $F(1, 648)=58.01$ ,  $MSE=37.77$ ,  $p<.0001$ ,  $\eta_p^2=.08$ , and more benevolent sexism,  $F(1, 648)=14.36$ ,  $MSE=8.78$ ,  $p<.0001$ ,  $\eta_p^2=.02$  (consistent with Hypothesis 3b), and less warmth toward feminists,  $F(1, 648)=75.66$ ,  $MSE=397.71$ ,  $p<.0001$ ,  $\eta_p^2=.11$  (consistent with Hypothesis 3c).

### Correlations

With respect to our second research question, we first examined the bivariate correlations across all variables separately for men and women participants. As hypothesized for men participants, more mindfulness was associated with more internal motivation to respond without sexism (consistent with Hypothesis 4a), less benevolent sexism (consistent with Hypothesis 4b), and more warmth toward feminists (consistent with Hypothesis 4c, see Table 3). Although more mindfulness was also associated with less hostile sexism, this effect did not reach conventional levels of significance, which is inconsistent with Hypothesis 4b. In men participants, more warmth towards feminists was associated with more internal and external motivation to respond without sexism (consistent with Hypothesis 4d) and less hostile sexism (consistent with Hypothesis 4e). In women participants, more mindfulness was associated with less hostile sexism only, whereas more warmth towards feminists was associated with more internal and external motivation to respond without sexism and less hostile sexism. We next examined the unique effects of these predictors.

### Mediation Analysis

Given the observed gender differences on levels of internal motivation to respond without sexism, ambivalent sexism, and warmth toward feminists (Table 2), as well as the different pattern of bivariate correlations amongst variables for men and women (Table 3) and our a priori hypotheses, we evaluated the multivariate associations within each group

separately. To do so, we estimated a multiple-group path model using maximum likelihood within Mplus Version 6.1 (Muthén and Muthén 1998–2010). All parameters were initially estimated separately for men and women participants. We then tested in sequential analyses whether the model paths (i.e., direct and indirect effects) differed by gender using likelihood ratio tests for the decrease in model fit after constraining each path to be equal between gender groups (in which  $\chi^2$  values for 1° of freedom  $>3.84$  indicate a significant difference).

The estimated path model is shown in Fig. 1, in which mindfulness was the predictor (X), internal and external motivation to respond without sexism and hostile and benevolent sexism were the mediators (M), and warmth toward feminists was the outcome (Y). This allowed us to consider each variable's unique direct effects, as well as the extent of indirect effects of mindfulness to warmth toward feminists through internal and external motivation to respond without sexism and through hostile and benevolent sexism. Following recent recommendations for testing mediation (Mallinckrodt et al. 2006), we used 10,000 bootstrap samples to obtain empirical standard errors and 95 % bias-corrected confidence intervals with which to assess the significance of indirect effects (Williams and MacKinnon 2008). Accordingly, an indirect effect is significant and indicates mediation if the 95 % confidence interval does not contain zero (see Mallinckrodt et al. 2006). Table 4 provides the unstandardized parameter estimates, their standard errors, accompanying  $p$ -values, and standardized parameter estimates for both the direct and indirect effects. Residual correlations were estimated among all mediators, such that the model was saturated (i.e., all possible relationships were estimated, no degrees of freedom remained), and thus fit perfectly, as in traditional linear regression.

As shown in the first set of rows in Table 4, as expected given the bivariate correlations, direct paths between mindfulness to the mediators (X to M1-4) indicated that more mindfulness was associated with more internal motivation to respond without sexism (consistent with Hypothesis 4a) and

**Table 3** Inter-correlations of all factors by participant gender for main study

	1.	2.	3.	4.	5.	6.
1. Mindfulness	–	<b>.20</b>	.10	<b>–.17</b>	–.08	<b>.15</b>
2. Internal motivation	.04	–	<b>.39</b>	.06	<b>–.40</b>	<b>.45</b>
3. External motivation	–.04	<b>.38</b>	–	<b>.14</b>	.05	.11
4. Benevolent sexism	.08	–.01	<b>.17</b>	–	.07	–.06
5. Hostile sexism	<b>–.11</b>	<b>–.21</b>	.03	<b>.20</b>	–	<b>–.44</b>
6. Warmth toward feminists	–.00	<b>.30</b>	<b>.14</b>	–.08	<b>–.24</b>	–

Bold font denotes significant correlation coefficients. Correlations for men ( $N=272$ – $273$ ) are reported above the diagonal and correlations for women ( $N=378$ – $380$ ) are reported below the diagonal. Mindfulness (1 = rarely, 4 = almost always), Warmth Toward Feminists ( $0^\circ$  = very coolly,  $100^\circ$  = very warmly), and Internal Motivation, External Motivation, Hostile Sexism, Benevolent Sexism (1 = disagree strongly, 7 = agree strongly)



**Table 4** Path analysis testing the proposed model of mindfulness and sexism for main study

Label	Model parameter	Men				Women				Test of gender difference	
		Est	SE	<i>p</i> <	Std	Est	SE	<i>p</i> <	Std	$\chi^2(1)$	<i>p</i> <
Mindfulness predicting:											
XtoM1	Internal Motivation	<b>.63</b>	.20	.002	.197	.10	.14	.490	.036	<b>5.11</b>	.024
XtoM2	External Motivation	.27	.17	.100	.095	-.12	.14	.395	-.044	3.10	.078
XtoM3	Hostile Sexism	-.17	.13	.190	-.084	<b>-.18</b>	.08	.027	-.109	.00	.948
XtoM4	Benevolent Sexism	<b>-0.31</b>	.11	.006	-.170	.14	.08	.080	.081	<b>10.21</b>	.001
Warmth predicted by:											
XtoY	Mindfulness	.21	.38	.575	.038	-.13	.27	.641	-.026	.78	.378
M1toY	Internal Motivation	<b>.55</b>	.11	.000	.316	<b>.45</b>	.11	.001	.247	.46	.499
M2toY	External Motivation	.05	.11	.669	.024	.08	.10	.396	.045	.06	.809
M3toY	Hostile Sexism	<b>-.85</b>	.16	.001	-.311	<b>-.54</b>	.17	.001	-.180	2.05	.152
M4toY	Benevolent Sexism	-.16	.18	.376	-.052	-.16	.16	.321	-.055	.00	.995
Indirect effects from mindfulness to warmth through:											
IndM1	Internal Motivation	<b>.35</b>	.13	.007	.062	.04	.07	.506	.009	1.38	.501
IndM2	External Motivation	.01	.04	.723	.002	-.01	.02	.626	-.002	.84	.659
IndM3	Hostile Sexism	.15	.43	.224	.026	.10	.06	.081	.020	2.97	.226
IndM4	Benevolent Sexism	.05	.06	.434	.009	-.02	.03	.421	-.004	.78	.677

Bold font denotes significant unstandardized coefficient estimates. Mindfulness (1 = *rarely*, 4 = *almost always*), Warmth refers to Warmth Toward Feminists (0° = *very coolly*, 100° = *very warmly*), and Hostile Sexism, Benevolent Sexism, Internal Motivation, and External Motivation (1 = *disagree strongly*, 7 = *agree strongly*)

less benevolent sexism in men participants (consistent with Hypothesis 4b); these relationships were significantly weaker in women participants. In women participants only the direct path of more mindfulness to less hostile sexism was significant, and this path did not differ between men and women. With respect to the direct paths from X to Y and M1-4 to Y, more warmth towards feminists was no longer related to more mindfulness for either gender, but was still uniquely predicted by more internal motivation to respond without sexism (consistent with Hypothesis 4d) and less hostile sexism (consistent with Hypothesis 4e) for both genders.

Importantly, and providing the critical test for the hypotheses regarding our third question, with respect to the indirect effects between mindfulness and warmth towards feminists, as hypothesized, the indirect effect through internal motivation to respond without sexism was significant in men participants (consistent with Hypothesis 5a), indicating that more internal motivation to respond without sexism is one mechanism that explains the relation between mindfulness and warmth toward feminists in men participants. However, contrary to Hypothesis 5b, the indirect effects through hostile sexism and benevolent sexism were not uniquely significant for men participants. No indirect effects were significant in women participants. We discuss the main study in light of the findings from the preliminary study in the general discussion.

## General Discussion

The purpose of this research was to examine relations between mindfulness, sexism, and prejudice toward feminists. Despite the wide range of processes that have been studied in connection with mindfulness (Brown et al. 2007) and the importance of identifying factors that may temper people's sexist beliefs and feelings toward women who violate traditional gender roles (Lee et al. 2010), particularly feminists (Eagly and Karau 2002; Fiske et al. 2002), no published studies have examined relations between mindfulness and sexism. In fact, to our knowledge only one study has explored relations between mindfulness and prejudice more generally (Niemic et al. 2010). To consider these issues, we assessed mindfulness, motivation to respond without sexism, ambivalent sexism, and warmth toward feminists in men and women. In the next sections, we summarize the findings of this investigation, highlight the implications of this work, and discuss the limitations and next critical directions for future research.

## Summary and Implications

Replicating previous research, the expected gender differences on sexist motivations, beliefs, and feelings emerged; relative to women, men reported less internal motivation to respond without sexism and more hostile and benevolent

sexism, as well as less warmth toward feminists. The gender effects for warmth toward feminists initially emerged in the preliminary study and were replicated in the main study. No gender differences emerged on mindfulness or external motivation to respond without sexism.

This is the first work to show a link of mindfulness and internal motivation to respond without sexism, ambivalent sexism, and warmth toward feminists. We reasoned that one way to reduce prejudice toward feminists (Eagly and Karau 2002) was to examine factors that are related to less sexist motivations and beliefs. We suggested that more mindful, nonjudgmental attention and awareness to the present moment (Brown et al. 2007; Langer 1989; Kabat-Zinn 1994) would be associated with less sexist motivations and beliefs and thus, less prejudice toward feminists. Consistently, we found that more mindfulness was related with more internal motivation to respond without sexism, less benevolent sexism, and more warmth toward feminists for men. Although hostile sexism was not significantly related with mindfulness in the current investigation, there was a still a negative relation between these two variables for men and future studies should examine whether this relation is reliable. Consistent with previous research, we also found that more internal motivation to respond in a non-sexist manner and less sexist beliefs was associated with more warmth toward feminists.

Importantly, internal motivation to respond in a non-sexist manner emerged as a significant indirect effect between mindfulness and warmth toward feminists, indicating that less sexist motivations, rather than less sexist beliefs, contribute to mindful men directing less prejudice toward feminists. However, somewhat contrary to expectations, we found that sexist beliefs (neither hostile nor benevolent) did not explain relations between mindfulness and prejudice toward feminists.

Taken together, these findings have some important implications. They suggest that mindfulness may contribute to less prejudice toward women because it *motivates* men to think and behave in less sexist ways toward women. In their original articulation of ambivalent sexism theory, Glick and Fiske (1996) noted that men are both (a) aware of sexist beliefs of women as incompetent and inferior to men as a result of socialization in a sexist culture and (b) motivated to maintain these sexist beliefs because women are members of their outgroup and men enjoy higher status than women in Western societies. Our data suggest that it may be more difficult for mindful men to change sexist beliefs as an antidote for prejudice toward women who violate gender roles than to change sexist motivations. However, internally motivating mindful men to think and behave in a less sexist manner may be a first step toward reducing these deeply ingrained sexist beliefs.

This finding also provides a foundation for developing mindfulness interventions to reduce sexism. Future research,

for example, could examine whether mindfulness interventions reduce actual sexist behavior, particularly toward women who violate traditional gender roles. These could be longer mindfulness-based interventions (Baer 2003) that are often used in clinical work. It is also possible that short manipulations of mindfulness (Arch and Craske 2010) may also reduce momentary sexist behavior. Importantly, we found that less prejudice toward feminists was related to two different mindfulness measures—one that simply involved awareness to the present moment (in the preliminary study) and the one that involved non-judgmental awareness to the present moment (in the main study). Thus, it is possible that interventions that focus people on the present moment awareness aspect of mindfulness without an explicit focus on being nonjudgmental may reduce sexism. Finally, and importantly, mindfulness was associated with less benevolent sexism. Developing interventions to combat such subtle forms of sexism can be difficult because people often do not recognize these types of sexism as problematic (Barreto, and Ellemers 2005b; Lee et al. 2010). However, mindfulness appears to serve as an antidote for benevolent sexism, even though benevolent sexism is subtle in nature.

Importantly, in the present work, we primarily focused our examination on men. This focus emerged for a couple of reasons. First, as supported by previous research and the current data, compared to women, men hold more sexist motivations and beliefs toward women (particularly women who violate gender roles, Eagly and Karau 2002, and feminists, Fitzpatrick Bettencourt et al. 2011); thus, identifying factors associated with less sexism for men is a paramount question for research. Second, previous research revealed more mindfulness was associated with less prejudice toward outgroups. Because we focused our consideration on prototypic instances of sexism (sexism directed at women; Barreto and Ellemers 2005a; Inman and Baron 1996), the hypotheses regarding men were clearly derived from the outgroup distinction in previous research (Niemiec et al. 2010). Our data were mostly consistent with this focus; no significant relations emerged between mindfulness and internal motivation to respond without sexism, benevolent sexism, or warmth toward feminists for women in our main study. However, there were two exceptions to this general pattern. In the preliminary study, a significant relation did emerge between mindfulness and warmth toward feminists for women. Given the conflicting results across the preliminary and main studies, however, it is difficult to draw definitive conclusions. Future research utilizing additional measures of mindfulness may be helpful in this regard. A significant positive relation between mindfulness and hostile sexism also emerged for women. Thus, it appears that mindfulness may sometimes reduce sexist beliefs in women. Studies considering how to reduce sexism in women is an important next step for research. For example, future research is needed to determine whether the

mindfulness and warmth toward feminist link is indeed reliable. If so, identifying the mechanisms for this association is a critical next step. If not, researchers should identify other factors that may be useful in reducing sexism in general and toward feminists in particular for women. Finally, both men and women may have multiple motivations regarding sexism. Although motivation to respond without sexism is one motivation that may reduce sexism, other motivations, including system justification (e.g., Rudman et al. 2012) may exacerbate sexism in both women and men.

#### Limitations and Future Directions

Although we have couched our consideration of mindfulness and sexism as if mindfulness reduces sexism, particularly sexism toward feminists, our study suffers from the usual limitations inherent in cross-sectional survey research regarding lack of causal inferences. It is possible that mindfulness reduces sexism, but it is also possible that sexism reduces mindfulness or that other unmeasured factors cause reductions in both mindfulness and sexism. The purpose of the present work was simply to examine whether there were relations between mindfulness and warmth toward feminists (a group that often experiences prejudice, Eagly and Karau 2002; Fiske et al. 2002) in the first place, a necessary precursor examining causal mechanisms. However, future research should examine the direction of this relation more systematically, such as through experimental or longitudinal designs. It is possible that mindfulness causes reduced sexism, which would illuminate possible avenues for future research on sexism interventions. But it is also possible that sexism reduces mindfulness, and we think that this finding would be equally provocative. It would suggest that holding sexist beliefs not only has costs for targets, but also has costs for perpetrators. Given that mindfulness is associated with psychological health (Brown et al. 2007), it is possible that holding prejudiced beliefs about other people undermines some important aspects of psychological well-being.

One additional direction for future research would be to examine relations between mindfulness and sexism in other cultures. The samples used in the present research were from a Midwestern University in the U.S. It is possible that different patterns would emerge in Eastern cultures because mindfulness is a concept and practice derived from Eastern, Buddhist traditions of spirituality (Kabat-Zinn 1990). Given that mindfulness is a concept that permeates Eastern cultures more than Western cultures, it is possible that people in more Eastern cultures are simply less sexist than people in Western cultures. Yet, research shows that people hold sexist beliefs across Western and Eastern cultures (Glick et al. 2000). It is also possible that even though people from more Eastern cultures are more mindful, they have developed other strategies for creating and maintain prejudice toward their outgroups and

thus a mindfulness intervention may be less effective in Eastern than Western cultures. These are important next directions for research on mindfulness and sexism.

#### Concluding Remarks

The purpose of this research was to examine the relation between mindfulness, sexism, and prejudice toward women who violate traditional gender roles. It appears that if people “just think about it”—if they are chronically aware of the present moment in a non-judgmental way and become more mindful (rather than mindless)—then prejudiced motivations and beliefs including sexism may be reduced. Importantly, a reduction in sexist motivation is one factor that explains the relation between mindfulness and prejudice toward feminists for men.

#### References

- Arch, J. J., & Craske, M. G. (2010). Laboratory stressors in clinically anxious and non-anxious individuals: The moderating role of mindfulness. *Behaviour Research and Therapy*, *48*, 495–505. doi:10.1016/j.brat.2010.02.005.
- Baer, R. A. (2003). Mindfulness training as a clinical intervention: A conceptual and empirical review. *Clinical Psychology: Science and Practice*, *10*, 125–143. doi:10.1093/clipsy/bpg015.
- Baer, R. A., Smith, G. T., & Allen, K. B. (2004). Assessment of mindfulness by self-report: The Kentucky inventory of mindfulness skills. *Assessment*, *11*, 191–206. doi:10.1177/1073191104268029.
- Barreto, M., & Ellemers, N. (2005a). The perils of political correctness: Men’s and women’s responses to old-fashioned and modern sexist views. *Social Psychology Quarterly*, *68*, 75–88. doi:10.1177/019027250506800106.
- Barreto, M., & Ellemers, N. (2005b). The burden of benevolent sexism: How it contributes to the maintenance of gender inequalities. *European Journal of Social Psychology*, *35*, 633–642. doi:10.1002/ejsp.270.
- Baumeister, R., & Finkel, E. (Eds.). (2010). *Advanced social psychology: The state of the science*. New York: Oxford University Press.
- Brown, K., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822–848. doi:10.1037/0022-3514.84.4.822.
- Brown, K., Ryan, R. M., & Creswell, J. (2007). Addressing fundamental questions about mindfulness. *Psychological Inquiry*, *18*, 272–281. doi:10.1080/10478400701703344.
- Buchheld, N., Grossman, P., & Walach, H. (2001). Measuring mindfulness in insight meditation (vipassana) and meditation-based psychotherapy: The development of the Freiburg Mindfulness Inventory (FMI). *Journal of Meditation and Research*, *1*, 11–34.
- Cardaciotto, L., Herbert, J. D., Forman, E. M., Moitra, E., & Farrow, V. (2008). The assessment of present-moment awareness and acceptance: The Philadelphia Mindfulness Scale. *Assessment*, *15*, 204–223. doi:10.1177/1073191107311467.
- Chen, Z., Fiske, S. T., & Lee, T. L. (2009). Ambivalent sexism and power-related gender-role ideology in marriage. *Sex Roles*, *60*, 765–778. doi:10.1007/s11199-009-9585-9.
- Dardenne, B., Dumont, M., & Bollier, T. (2007). Insidious dangers of benevolent sexism: Consequences for women’s performance. *Journal of Personality and Social Psychology*, *93*, 764–779. doi:10.1037/0022-3514.93.5.764.

- Demick, J. (2000). Toward a mindful psychological science: Theory and application. *Journal of Social Issues, 56*, 141–159. doi:10.1111/0022-4537.00156.
- Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*, 5–18. doi:10.1037/0022-3514.56.1.5.
- Dumont, M., Sarlet, M., & Dardenne, B. (2010). Be too kind to a woman, she'll feel incompetent: Benevolent sexism shifts self-construal and autobiographical memories toward incompetence. *Sex Roles, 62*, 545–553. doi:10.1007/s11199-008-9582-4.
- Eagly, A. H., & Karau, S. J. (2002). Role congruity theory of prejudice toward female leaders. *Psychological Review, 109*, 573–598. doi:10.1037/0033-295X.109.3.573.
- Eagly, A. H., & Wood, W. (1991). Explaining sex differences in social behavior: A meta-analytic perspective. *Personality and Social Psychology Bulletin, 17*, 306–315. doi:10.1177/0146167291173011.
- Fiske, S. T., & Neuberg, S. L. (1990). A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 23, pp. 1–74). New York: Academic.
- Fiske, S. T., Cuddy, A. C., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*, 878–902. doi:10.1037/0022-3514.82.6.878.
- Fitzpatrick Bettencourt, K. E., Vacha-Haase, T., & Byrne, Z. S. (2011). Older and younger adults' attitudes toward feminism: The influence of religiosity, political orientation, gender, education, and family. *Sex Roles, 64*, 863–874. doi:10.1007/s11199-011-9946-z.
- Gervais, S. J., & Vescio, T. K. (2007). The origins and consequences of subtle sexism. In A. M. Columbus (Ed.), *Advances in psychology research* (Vol. 49, pp. 137–166). Hauppauge: Nova.
- Gervais, S. J., & Vescio, T. K. (2012). The effect of patronizing behavior and control on men and women's performance in stereotypically masculine domains. *Sex Roles, 66*, 479–491. doi:10.1007/s11199-011-0115-1.
- Gifford, E. V., Kohlenberg, B. S., Hayes, S. C., Antonuccio, D. O., Piasecki, M., Rasmussen-Hall, M. L., et al. (2004). Acceptance based treatment for smoking cessation. *Behavior Therapy, 35*, 689–705. doi:10.1016/S0005-7894(04)80015-7.
- Glick, P., & Fiske, S. T. (1996). The ambivalent sexism inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology, 70*, 491–512. doi:10.1037/0022-3514.70.3.491.
- Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist, 56*, 109–118. doi:10.1037/0003-066X.56.2.109.
- Glick, P., Diebold, J., Bailey-Werner, B., & Zhu, L. (1997). The two faces of Adam: Ambivalent sexism and polarized attitudes toward women. *Personality and Social Psychology Bulletin, 23*, 1323–1334. doi:10.1177/01461672972312009.
- Glick, P., Fiske, S. T., Mladinic, A., Saiz, J. L., Abrams, D., Masser, B., & López, W. (2000). Beyond prejudice as simple antipathy: Hostile and benevolent sexism across cultures. *Journal of Personality and Social Psychology, 79*, 763–775. doi:10.1037/0022-3514.79.5.763.
- Glick, P., Lameiras, M., & Castro, Y. (2002). Education and Catholic religiosity as predictors of hostile and benevolent sexism toward women and men. *Sex Roles, 47*, 433–441. doi:10.1023/A:1021696209949.
- Greenberg, J., Schimel, J., Martens, A., Solomon, S., & Pyszczynski, T. (2001). Sympathy for the devil: Evidence that reminding Whites of their mortality promotes more favorable reactions to White racists. *Motivation and Emotion, 25*, 113–133. doi:10.1023/A:1010613909207.
- Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: A meta-analysis. *Journal of Psychosomatic Research, 57*, 35–43. doi:10.1016/S0022-3999(03)00573-7.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*, 657–674. doi:10.1111/0022-4537.00234.
- Hugenberg, K., & Bodenhausen, G. V. (2003). Facing prejudice: Implicit prejudice and the perception of facial threat. *Psychological Science, 14*, 640–643. doi:10.1046/j.0956-7976.2003.psci\_1478.x.
- Inman, M. L., & Baron, R. S. (1996). Influence of prototypes on perceptions of prejudice. *Journal of Personality and Social Psychology, 70*, 727–739. doi:10.1037/0022-3514.70.4.727.
- Kabat-Zinn, J. (1990). *Full catastrophe living: Using the wisdom of your body and mind to face stress, pain and illness*. New York: Delacourt.
- Kabat-Zinn, J. (1994). *Wherever you go, there you are*. New York: Hyperion.
- Klonis, S. C., Plant, E., & Devine, P. G. (2005). Internal and external motivation to respond without sexism. *Personality and Social Psychology Bulletin, 31*, 1237–1249. doi:10.1177/0146167205275304.
- Lakey, C. E., Campbell, W. K., Brown, K. W., & Goodie, A. S. (2007). Dispositional mindfulness as a predictor of the severity of gambling outcomes. *Personality and Individual Differences, 43*, 1698–1710. doi:10.1016/j.paid.2007.05.007.
- Langer, E. J. (1989). *Mindfulness*. New York: Da Capo Press.
- Langer, E. J., & Moldoveanu, M. (2000). The construct of mindfulness. *Journal of Social Issues, 56*, 1–9. doi:10.1111/0022-4537.00148.
- Langer, E. J., & Piper, A. I. (1987). The prevention of mindlessness. *Journal of Personality and Social Psychology, 53*, 280–287. doi:10.1037/0022-3514.53.2.280.
- Lau, M. S., Bishop, S. R., Segal, Z. V., Buis, T., Anderson, N. D., Carlson, L., Shapiro, S., Carmody, J., Abbey, S., & Devins, G. (2006). The Toronto mindfulness scale: Development and validation. *Journal of Clinical Psychology, 62*, 1445–1467. doi:10.1002/jclp.
- Leary, M. R., Adams, C. E., & Tate, E. B. (2006). Hypo-egoic self-regulation: Exercising self-control by diminishing the influence of the self. *Journal of Personality, 74*, 1803–1831. doi:10.1111/j.1467-6494.2006.00429.x.
- Lee, T. L., Fiske, S. T., & Glick, P. (2010). Next gen ambivalent sexism: Converging correlates, causality in context, and converse causality, an introduction to the special issue. *Sex Roles, 62*, 395–404. doi:10.1007/s11199-010-9747-9.
- Macrae, C., Milne, A. B., & Bodenhausen, G. V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology, 66*, 37–47. doi:10.1037/0022-3514.66.1.37.
- Macrae, C., Bodenhausen, G. V., & Milne, A. B. (1995). The dissection of selection in person perception: Inhibitory processes in social stereotyping. *Journal of Personality and Social Psychology, 69*, 397–407. doi:10.1037/0022-3514.69.3.397.
- Mallinckrodt, B., Abraham, W., Wei, M., & Russell, D. W. (2006). Advances in testing the statistical significance of mediation effects. *Journal of Counseling Psychology, 53*, 372–378. doi:10.1037/0022-0167.53.3.372.
- Muthén, L. K., & Muthén, B. O. (1998–2010). *Mplus user's guide*. Los Angeles, CA: Author.
- Niemiec, C. P., Brown, K., Kashdan, T. B., Cozzolino, P. J., Breen, W. E., Levesque-Bristol, C., & Ryan, R. M. (2010). Being present in the face of existential threat: The role of trait mindfulness in reducing defensive responses to mortality salience. *Journal of Personality and Social Psychology, 99*, 344–365. doi:10.1037/a0019388.
- Rudman, L. A., & Glick, P. (2001). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57*, 743–762. doi:10.1111/0022-4537.00239.



- Rudman, L. A., & Glick, P. (2008). *The social psychology of gender: How power and intimacy shape gender relations*. New York: Guilford.
- Rudman, L. A., Moss-Racusin, C. A., Phelan, J. E., & Nauts, S. (2012). Status incongruity and backlash effects: Defending the gender hierarchy motivates prejudice against female leaders. *Journal of Experimental Social Psychology*, *48*, 165–179. doi:10.1016/j.jesp.2011.10.008.
- Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology*, *35*, 4–28. doi:10.1006/jesp.1998.1373.
- Swim, J. K., Aikin, K. J., Hall, W. S., & Hunter, B. A. (1995). Sexism and racism: Old-fashioned and modern prejudices. *Journal of Personality and Social Psychology*, *68*, 199–214. doi:10.1037/0022-3514.68.2.199.
- Swim, J. K., Cohen, L. L., & Hyers, L. L. (1998). Experiencing everyday prejudice and discrimination. In J. K. Swim & C. Stangor (Eds.), *Prejudice: The target's perspective* (pp. 37–60). San Diego: Academic.
- Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism: Evidence for its incidence, nature, and psychological impact from three daily diary studies. *Journal of Social Issues*, *57*, 31–53. doi:10.1111/0022-4537.00200.
- Tougas, F., Brown, R., Beaton, A. M., & Joly, S. (1995). Neosexism: Plus ça change, plus c'est pareil. *Personality and Social Psychology Bulletin*, *21*, 842–849. doi:10.1177/0146167295218007.
- U.N. World Survey on the Role of Women in Development. (2009). At a glance: Women's control over economic resources and access to financial resources. Retrieved from [http://www.un.org/womenwatch/daw/ws2009/documents/DESA\\_Survey\\_FactSheet.pdf](http://www.un.org/womenwatch/daw/ws2009/documents/DESA_Survey_FactSheet.pdf).
- U.S. Department of Labor & Bureau of Labor Statistics. (2006). Women in the labor force: A databook (Report No. 996). Retrieved from <http://www.bls.gov/cps/wlfdatabook2006.htm>.
- Vescio, T. K., Gervais, S. J., Snyder, M., & Hoover, A. (2005). Power and the creation of patronizing environments: The stereotype-based behaviors of the powerful and their effects on female performance in masculine domains. *Journal of Personality and Social Psychology*, *88*, 658–672. doi:10.1037/0022-3514.88.4.658.
- Walach, H., Buchheld, N., Buttenmüller, V., Kleinknecht, N., & Schmidt, S. (2006). Measuring mindfulness—The Freiburg Mindfulness Inventory (FMI). *Personality and Individual Differences*, *40*, 1543–1555. doi:10.1016/j.paid.2005.11.025.
- Weiten, W., Lloyd, M. A., Dunn, D. S., & Hammer, E. Y. (2008). *Psychology applied to modern life: Adjustment in the 21st century*. Florence: Wadsworth Publishing.
- Wenk-Sormaz, H. (2005). Meditation can reduce habitual responding. *Advances In Mind-Body Medicine*, *21*, 33–49.
- Williams, J., & MacKinnon, D. P. (2008). Resampling and distribution of the product methods for testing indirect effects in complex models. *Structural Equation Modeling*, *15*, 23–51.